

I CLAIM:

1. A method for delivery of a composition in the oral cavity comprising the steps of
 - a) creating, or utilizing an existing, void in one or more teeth or tooth modifications, and
 - 5 b) supplying to the void the composition in a slow-release form.
2. The method of claim 1 wherein the one or more teeth are selected from the group consisting of natural teeth, implants and dentures.
3. The method of claim 1 wherein the one or more tooth modifications are selected from the group consisting of fillings, crowns, temporary crowns and root canal therapies.
- 10 4. The method of claim 3 wherein the composition is incorporated in a composite used as a filling.
5. The method of claim 3 wherein the composition is placed inside the crown.
6. The method of claim 5 wherein the crown is semi-porous.
7. The method of claim 1 wherein the composition is selected from the group consisting
15 of flavorings, anti-bacterials, odor reducers, chemotherapeutics, radiotherapeutics, compositions to improve oral health, anesthetics, antiseptics, antimicrobials, antifungals, anti-inflammatories, antivirals, and combinations thereof.
8. The method of claim 7 wherein the flavorings are flavored oils.
9. The method of claim 7 wherein the odor reducers are selected from the group
20 consisting of chlorine dioxide, zinc gluconate, other biocompatible zinc salts, chlorohexidine, glutaraldehyde, scents and combinations thereof.
10. The method of claim 7 wherein the chemotherapeutics are doxorubicin, vincristine, or a combination thereof.

11. The method of claim 7 wherein the radiotherapeutics are selected from the group consisting of radioactive seeds of ^{125}I , ^{192}I , palladium, iridium and combinations thereof.
12. The method of claim 1 wherein the composition is selected from the group consisting of penicillins, tetracyclines, sodium fluoride, potassium nitrate, Lidocaine, iodine containing
5 compounds, chlorhexidine, clotrimazole, Nystatin, ibuprofen and salicylates.
13. The method of claim 1 wherein the composition is used to treat malodorous breath.
14. The method of claim 1 wherein the composition is used to decrease the amount of undesirable microbes in the oral cavity.
15. The method of claim 1 wherein the composition is used to maintain the health of the
10 oral cavity.
16. The method of claim 1 wherein the composition is used to maintain the health of a mammalian body.
17. The method of claim 1 wherein the slow release formulation is comprised of a biodegradable, biocompatible gel.
- 15 18. The method of claim 16 wherein the gel comprises hydroalkyl methyl cellulose.
19. A method for delivery of a composition in the oral cavity comprising the steps of
- a) mixing the composition in glazing material to form a glazing mixture, and
 - b) low firing the glazing mixture onto a tooth surface selected from the group consisting of crowns, inlays, onlays and veneers.
- 20 20. The method of claim 19 wherein the tooth surface is roughened before being placed in contact with the glazing mixture.
21. The method of claim 19 wherein the composition is selected from the group consisting of flavorings, anti-bacterials, odor reducers, chemotherapeutics,

radiotherapeutics, compositions to improve oral health, anesthetics, antiseptics, antimicrobials, antifungals, anti-inflammatories, antivirals, and combinations thereof.

22. The method of claim 21 wherein the flavorings are flavored oils.

23. The method of claim 21 wherein the odor reducers are selected from the group
5 consisting of chlorine dioxide, zinc gluconate, other biocompatible zinc salts, chlorohexidine, glutaraldehyde, scents and combinations thereof.

24. The method of claim 21 wherein the chemotherapeutics are doxorubicin, vincristine, or a combination thereof.

25. The method of claim 21 wherein the radiotherapeutics are selected from the group
10 consisting of radioactive seeds of ^{125}I , ^{192}I , palladium, iridium and combinations thereof.

26. The method of claim 21 wherein the composition is selected from the group consisting of penicillins, tetracyclines, sodium fluoride, potassium nitrate, Lidocaine, iodine containing compounds, chlorhexidine, clotrimazole, Nystatin, ibuprofen and salicylates.

27. The method of claim 21 wherein the composition is used to treat malodorous breath.

15 28. The method of claim 21 wherein the composition is used to decrease the amount of undesirable microbes in the oral cavity.

29. The method of claim 21 wherein the composition is used to maintain the health of the oral cavity.

30. The method of claim 21 wherein the composition is used to maintain the health of a
20 mammalian body.

31. A method for delivery of a composition in the oral cavity comprising the steps of

a) preparing a low viscosity, biocompatible, slowly releasing composition comprising a gel and a desired medicament, and

b) coating one or more teeth, tooth modification, gums, or a combination thereof, of a user with the composition.

32. The method of claim 31 wherein the gel is a hydrogel.

33. The method of claim 31 wherein the gel is a hydroxyalkyl methyl cellulose.

5 34. The method of claim 33 wherein the gel is selected from the group consisting of hydroxypropyl-cellulose, carboxy-methyl cellulose, hydroxypropylcellulose, and combinations thereof.

35. The method of claim 31 wherein the gel is a low viscosity hydrogel.

10 36. The method of claim 31 wherein the composition comprises a medicament selected from the group consisting of flavorings, anti-bacterials, odor reducers, chemotherapeutics, radiotherapeutics, compositions to improve oral health, anesthetics, antiseptics, antimicrobials, antifungals, anti-inflammatories, antivirals, and combinations thereof.

37. The method of claim 36 wherein the flavorings are flavored oils.

15 38. The method of claim 36 wherein the odor reducers are selected from the group consisting of chlorine dioxide, zinc gluconate, other biocompatible zinc salts, chlorohexidine, glutaraldehyde, scents and combinations thereof.

39. The method of claim 36 wherein the chemotherapeutics are doxorubicin, vincristine, or a combination thereof.

20 40. The method of claim 36 wherein the radiotherapeutics are selected from the group consisting of radioactive seeds of ^{125}I , ^{192}I , palladium, iridium and combinations thereof.

41. The method of claim 36 wherein the composition is selected from the group consisting of penicillins, tetracyclines, sodium fluoride, potassium nitrate, Lidocaine, iodine containing compounds, chlorhexidine, clotrimazole, Nystatin, ibuprofen and salicylates.

42. The method of claim 36 wherein the composition is used to treat malodorous breath.

43. The method of claim 36 wherein the composition is used to decrease the amount of undesirable microbes in the oral cavity.

44. The method of claim 36 wherein the composition is used to maintain the health of the oral cavity.

5 45. The method of claim 36 wherein the composition is used to maintain the health of a mammalian body

46. A dental device for the delivery of a composition to the oral cavity comprised of an artificial tooth or tooth modification, a void in said tooth or tooth modification, and a composition within said void, wherein the composition comprises a slow release gel and a
10 desired compound.

47. The device of claim 46 wherein the artificial tooth is an implant.

48. The device of claim 46 wherein the tooth modification is a crown.

49. The device of claim 46 wherein the compound is selected from the group consisting of flavorings, anti-bacterials, odor reducers, chemotherapeutics, radiotherapeutics,
15 compositions to improve oral health, anesthetics, antiseptics, antimicrobials, antifungals, anti-inflammatories, antivirals, and combinations thereof.

50. The device of claim 49 wherein the flavorings are flavored oils.

51. The device of claim 49 wherein the odor reducers are selected from the group consisting of chlorine dioxide, zinc gluconate, other biocompatible zinc salts,
20 chlorohexidine, glutaraldehyde, scents and combinations thereof.

52. The device of claim 49 wherein the chemotherapeutics are doxorubicin, vincristine, or a combination thereof.

53. The device of claim 49 wherein the radiotherapeutics are selected from the group consisting of radioactive seeds of ^{125}I , ^{192}I , palladium, iridium and combinations thereof.

54. The device of claim 49 wherein the compound is selected from the group consisting of penicillins, tetracyclines, sodium fluoride, potassium nitrate, Lidocaine, iodine containing compounds, chlorhexidine, clotrimazole, Nystatin, ibuprofen and salicylates.
55. The device of claim 46 wherein the slow release formulation is comprised of a
5 biodegradable, biocompatible gel.
56. The device of claim 55 wherein the gel comprises hydroxy alkyl methyl cellulose.
57. A dental device for the delivery of a composition to the oral cavity comprised of a crown or dentures, wherein said composition is incorporated in said crown or dentures in a manner that allows slow release of the composition.
- 10 58. The device of claim 57 wherein the base of the dentures is comprised of plastic, and the composition is mixed in the plastic.
59. The device of claim 57 wherein the composition is incorporated in the crown or one or more denture teeth.
60. The device of claim 57 wherein the crown is glazed and the composition is
15 incorporated in the glaze.
61. The device of claim 57 wherein the compound is selected from the group consisting of flavorings, anti-bacterials, odor reducers, chemotherapeutics, radiotherapeutics, compositions to improve oral health, anesthetics, antiseptics, antimicrobials, antifungals, anti-inflammatories, antivirals, and combinations thereof.
- 20 62. The device of claim 61 wherein the flavorings are flavored oils.
63. The device of claim 61 wherein the odor reducers are selected from the group consisting of chlorine dioxide, zinc gluconate, other biocompatible zinc salts, chlorohexidine, glutaraldehyde, scents and combinations thereof.
64. The device of claim 61 wherein the chemotherapeutics are doxorubicin, vincristine,
25 or a combination thereof.

65. The device of claim 61 wherein the radiotherapeutics are selected from the group consisting of radioactive seeds of ^{125}I , ^{192}I , palladium, iridium and combinations thereof.
66. The device of claim 61 wherein the compound is selected from the group consisting of penicillins, tetracyclines, sodium fluoride, potassium nitrate, Lidocaine, iodine containing
5 compounds, chlorhexidine, clotrimazole, Nystatin, ibuprofen and salicylates.
67. A slowly dissolving orally consumable gel composition that when applied to one or more teeth, tooth modifications, gums, or combinations thereof, delivers freshening agents to the oral cavity, the composition comprised of a homogeneous mixture of a water soluble very low viscosity hydroxyalkylmethyl gel coat, a flavoring agent, and a water dispersible
10 pre-gelatized starch.
68. The gel composition of claim 67 wherein the hydroxyalkyl methyl gel is hydroxypropyl methyl gel.
69. The gel composition of claim 67 comprising a slowly dissolving water soluble cellulose, a flavoring agent, and a water dispersible pre-gelatized starch.